

Natural Gas Market Outlook 2006-2016

CPUC/CEC Workshop Interstate Pipeline Expansions

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Outline

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2. Changes in Gas Supply Fundamentals
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Kern River 2003 Expansion

- On May 1, 2003, the 906,000 Dth/d expansion project was placed in service, on schedule and \$79m under budget.
- Kern River's total design capacity is now 1,752,000 Dth/d, and the capacity is fully contracted.
- 97% of the expansion capacity is contracted to California delivery points. Kern River provides 20% or more of the total California natural gas market.
- On May 1, 2003, Kern River transported 1,659,000 Dth/d (95% load factor).
- Post-expansion, Kern River has averaged a 100% load factor.
- The peak day scheduled delivery was over 2,000,000 Dth/d.

Kern River 2003 Expansion

- The 2003 Expansion was designed, permitted and constructed in just over two years from the March 2001 open season.
- The Expansion required a capital investment of \$1.2 billion.
- Kern River secured \$836 million of long-term project financing on May 1, 2003, at a 4.893% interest rate (Debt Rated A-).
- Kern River's cost of capital is among the cheapest in history.
- Kern River lowered expansion shipper rates by \$0.065 (11.4%) for 15-year term contracts on May 1, 2003, compared to the FERC approved rates.

Changes in Gas Supply Fundamentals

- Permian and San Juan Basin production is flat to declining and the rapidly growing Arizona and northern Mexico markets will put upward pricing pressure on limited supply.
- LNG supplies may have a role but are uncertain due to risks involving licensing, scheduling, construction costs, politics, safety, environmental concerns and related infrastructure.
 - Significant issues include 1) interchangeability of LNG (gas quality), 2) access into California LDCs, 3) infrastructure upgrades, and 4) LNG does not meet CARB or SCAQMD air quality standards.
 - Fast track Mexican LNG projects may now face full NEPA analysis in order to obtain presidential import licenses.
- Western Canadian Sedimentary Basin is recently in decline.
 - Lower initial production and high decline rates.
 - Higher operating costs.
 - Production curtailments of up to .25 Bcf/d to conserve bitumen (oil sands) have been ordered by the AEUB. 1-1.5 Bcf/d consumption forecast when EOR is in full production.
- Mackenzie gas may arrive within the decade, but 2 Bcf/d of available capacity on TransCanada going east could consume Mackenzie gas, and there is no guarantee Mackenzie gas will reach western markets.

Changes in Gas Supply Fundamentals

- Rocky Mountain supply is proven with a 63% production increase forecasted over ten years*.
- The State of Wyoming forecasts 2 Bcf/d of incremental production will be available for export by 2007.
- The Rocky Mountain Basin provides attractively priced gas to California, both currently and based upon consensus-forward pricing.
- California markets want Rockies supply. However, intrastate capacity constraints, SoCalGas capacity allocation procedures and a regulatory preference favoring El Paso and Transwestern pipelines are restricting gas-on-gas competition.
- California LDCs hold 2 Bcf/d of transportation capacity for core customers on interstate pipelines, but currently they have not subscribed for firm capacity on Kern River.

* Source: CEC August 2003, Natural Gas Market Assessment



California Infrastructure Issues

- Intrastate pipeline capacity is sufficient to provide reliability, but inadequate to provide gas-on-gas competition.
- 300 MMcf/d of Rocky Mountain supply is being rejected at California city gates due to capacity allocation procedures and a regulatory preference favoring El Paso and Transwestern pipelines.
- Discriminating against Rocky Mountain production sends the wrong message to Wyoming producers. California should be attracting Rocky Mountain production not encouraging exports to mid-continent markets.
- Intrastate backbone capacity (slack capacity) should be increased to provide more gas-on-gas competition and increase flexibility for storage injections.

Kern River Expansion Opportunities

- California utilities have 2 Bcf/d of contract capacity on competing interstate pipelines which expires by 2006. California LDCs should seek supply diversity and Kern River can provide the most economic access to prolific Rocky Mountain gas supplies.
- Kern River can be economically expanded by completing un-looped pipeline segments and adding compression.
- Engineering, environmental and hydraulic modeling work is underway to enable the pipeline to be expanded in a market-responsive manner. Expansion service could be initiated by November 2006, provided contract commitments are secured in early 2004. Any delay in obtaining contract commitments will delay an expansion.
- Kern River provides reliability, fuel efficiency and rate stability with only minor costs associated with new pipeline safety and integrity management legislation.
- Rocky Mountain supply is proven and pipeline looping projects are predictable, relative to the complexities of LNG or frontier pipelines.
- Kern River is well positioned, and is willing to make additional investments in needed energy infrastructure.